



# IMPLEMENTING AN ERGONOMICS PROGRAM

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## Introduction

The Workers Compensation Management Bureau, within the Department of Administration, developed this guidance to assist State of Montana agencies in implementing an ergonomics program. It explains why every organization should have an ergonomic program, what ergonomics is, and includes a simple best practice. Private sector employers should consult with their own safety consultants prior to applying this guidance to their worksite locations to ensure conformity with applicable laws and standards.

## What is Ergonomics?

Ergonomics is a science concerned with the ‘fit’ between people and their work. It puts people first, taking account their capabilities and limitations. Ergonomics aims to make sure that tasks, equipment, and the environment fit each worker. Not the worker fitting the task, equipment, or environment.

Ergonomics in the workplace is assessed to prevent musculoskeletal disorders. Some examples of musculoskeletal disorders are.

- Muscle strains and low back injuries
- Carpel Tunnel
- Tendinitis

## Why have an Ergonomics Program?

Taking account of ergonomics and human factors can reduce the chance of an incident which may result in an injury.

We must also:

- comply with the law.
- identify existing ergonomic issues.
- reduce the potential for ergonomic incidents.

## Public Sector Legal Requirements.

Montana is under federal OSHA jurisdiction which covers most private sector workers within the state. State and local government workers are not covered by federal OSHA. However, the Montana legislature enacted the Montana Safety Culture Act (MCA 39-71-1505) which provides rulemaking authority and defines the requirements of a Health and Safety program for state and local governmental employers. The Montana Department of Labor and Industry adopts a safety code for every place of employment conducted by a public-sector employer. This safety code adopts by reference the following occupational safety and health standards from the federal Occupational Safety and Health Administration Act, (Code of Federal Regulations, as of July 1, 2014, Title 29, Parts 1910 and 1926).

The Montana Safety Culture Act requires management to implement an effective safety and health program and to communicate its commitment to the safety and health of its employees as an organizational goal. For employers with more than 5 employees, this commitment requires development of policies and procedures that assign specific safety responsibilities and safety performance accountability. Procedures should outline the steps to report, investigate and take corrective action of work-related incidents, injuries, fatalities and known unsafe work conditions. This requirement for safety policies and procedures mirror the requirement outlined in federal OSHA for private sector employers.

## What should be in my Ergonomics Program?

Identify where you may need to do an ergonomic assessment then;

- Complete an assessment;
- Implement corrective actions;
- Review & Amend;
- Reporting Problems;
- Provide Training.
- Best Practice

# Identifying where to do an Ergonomic Assessment

## THE DATA

It is not always easy to identify where an assessment may be required, ergonomics covers all work areas. A good place to start is;

- Review your injury and accident data in from your workers compensation loss run.
- Review your own accident and near miss reports

Many workplace injuries are musculoskeletal disorders. Identify the areas where you have had these injuries. Decide if this is a priority place to start.

## THE TASK

Look at the different tasks within your organization, categorize them. For example:

- Office/Desk work
- Driver – Car/truck/Semi
- Driver - Heavy Equipment Operation
- Multiple tasks – Warehouse operator
- Multiple tasks – Workshop mechanic

Identifying generic tasks can help when planning and implementing an ergonomic program. Workstations that involve computer work can be assessed and tracked more easily this way.

## THE LOCATION

Most organizations are divided into areas, locations, divisions or departments. Identify some areas where there is an increased likelihood or chance of musculoskeletal disorders occurring.

## THE PLAN

Create a plan to assess the tasks in the areas. Decide what you want to include in your plan.

- Task Description
- Location/Division
- Area
- Date of assessment
- Corrective Actions
- Owner

## Completing Ergonomic Assessments

To assess the fit between a person and their work, you must consider a range of factors, including:

### **THE JOB/TASK BEING DONE**

- The demands on the worker (activities, workload, work pacing, shiftwork and fatigue).
- The equipment used (its design in terms of size, shape, controls, displays, and how appropriate it is for the task).
- The information used (how it is presented, accessed, and changed).
- The physical environment (temperature, humidity, lighting, noise, vibration).

### **THE INDIVIDUALS PHYSICAL AND PSYCHOLOGICAL CHARACTERISTICS**

- Preexisting conditions
- Posture.
- The senses, especially vision and hearing.
- Knowledge.
- Training.
- Experience.

### **THE ORGANIZATION**

- Teamwork and team structure.
- Supervision and leadership.
- Supportive management.
- Communications.
- Resources.

You will find a range of physical abilities in your workforce which you may need to consider in designing the area or equipment they use, and the tasks they perform.

By assessing people's abilities and limitations, their jobs, equipment and working environment and the interaction between them, it is possible to design safe, effective and productive work systems

The following examples highlights some of the typical ergonomics problems found in the workplace:

- Work demands too high or too low;
- The employee has little say in how they organize their work;
- Badly designed equipment, (awkward to use, or requiring additional effort)
- Conflicting demands, high productivity, quality, unachievable)

## **MATERIAL HANDLING**

Handling materials within the work environment can be anything from the office to a warehouse to a construction site.

Typical examples of problems are:

- The job involves lifting heavy or bulky, cumbersome to lift and carry;
- Frequent and infrequent lifting, carrying and storing of varying loads;
- The load must be lifted from the floor and or above shoulder height;
- The job involves frequent repetitive lifting or handling or body motion, limb, hand motion;
- The job requires awkward postures, bending, twisting;
- The job is performed under time pressure and or emergency situations;
- The environment is under changing conditions, weather, uneven surfaces;

These problems can lead to employees failing to follow procedures and take breaks. Which in turn can lead to accidents. Ensuring when handling materials we assess before we lift, get help if required and use lifting equipment provided is essential to reducing musculoskeletal disorders, injury or ill health.

## **WORKSTATION LAYOUT**

Workstations are not just the office. Workstations can be vehicles, production machines, benchwork, anywhere where work is taking place.

Typical examples of problems are:

- Items that are out of reach or inconvenient to use;
- Inadequate space to move;
- Workstation height to high or low causing awkward posture;
- Poor lighting causing eyestrain;
- Chair not properly adjusted to fit the person;
- Poor equipment design or position;

## **MANAGING THE WORKDAY**

It's important to understand the effects of not managing the workday can have on an employee.

Typical examples of problems are:

- Inadequate recovery time or breaks;
- Inflexible work hours, rigid timekeeping creating stress, leading to haste;
- Excessive monitoring of employee's productivity;
- Excessive travel or overtime;

These problems can lead to a poor working environment, fatigue and stress resulting in increases in incidents, injury, and ill health.

## THE EMPLOYEES

Workplaces where employees are involved in making decisions are more successful, safer and healthier. After all, employees know how they feel, what they are capable of and where their skills and talents are.

Employees can:

Help you spot workplace hazards

Make sure health and safety controls are practical

Employees have important knowledge of the work they do, the problems they have and the impact on safety and performance.

Examples of questions you could ask are;

- Are their working postures comfortable?
- Do they experience discomfort?
- Is their equipment appropriate, easy to use and well maintained?
- Do they follow procedures?

## Implement Corrective Actions

When implementing corrective actions, ensure a review plan is in place and record your actions and any further changes.

Corrective actions must not make the problem worse or create another unsafe condition or act. Typical controls are:

## ENGINEERING PHYSICAL CHANGES

- Implement lifting equipment;
- Reposition equipment, or workstations;
- Increase/ decrease height of workstations;
- Automation
- Engineer out unnecessary steps in the process.

## ADMINISTRATIVE CHANGES

- Training- require a 2-man lift;
- Regular breaks/job rotation;
- Implement process improvement projects to reduce, eliminate tasks.

## Reporting Problems

There are many ways to communicate with your employees about job hazards. Near miss and hazard reporting does not have to be a rigid set out process. It can be done by simply including questions to employees on your inspection sheet, calling them, or sitting down with them in a focus group or toolbox talk for 5 minutes.

- Email
- Word of Mouth
- Phone Calls
- Online surveys.
- Focus Groups
- Safety Committees

It is important to listen and take action when employees report a hazard. If you are unable to take action for whatever reason, then explain to the employees why and what you are going to do in the interim. On taking action, keep employees informed and complete the process by following up with employees.

## Provide Training

Training employees in ergonomics will help them to reduce or prevent the chance of developing a musculoskeletal disorder.

Training should include:

- Learn the principles of ergonomics and their applications.
- Learn about the proper use of equipment, tools, and machine controls.
- Use good work practices, including proper lifting techniques.
- Become more aware of work tasks that may lead to pain or injury.
- Recognize early symptoms of MSDs.
- Understand the importance of reporting and addressing early indications of MSDs before serious injuries develop.
- Understand procedures for reporting hazards, risks, work-related injuries and illnesses.

Training can be a progressive learning through 5-10 minutes toolbox talks or a longer more intense training, depending on the employees work area and the tasks they perform. All training should be recorded and refreshed on a regular basis.



## Best Practice

All health and safety training, information and promotion should be ongoing, from new hire to when an employee leaves the agency. This a best practice guide for all state agencies.

Best practice:

1. On starting a new position within an agency each new employee should receive an ergonomic evaluation by a competent person.
2. New employees should receive training and information on ergonomics, so they understand the hazards associated with their workstation.
3. Existing employees should receive an annual evaluation whereby they can self-evaluate and identify to the competent person any problems.
4. All employees every 5 years should receive training and an evaluation of their workstation by a competent person.
5. Ergonomic problems that cannot be resolved by the competent person can be escalated to the safety management consultant at Montana State Fund.
6. Ergonomic problems that cannot be resolve by the competent person or the safety management consultant at Montana State Fund can be escalated to a medical professional by the employee.
7. Assessment records are to be kept for a minimum of 3 years and show the date of assessment, the time, location, name of assessor, observations, recommendations, corrective actions and subsequent review of corrective actions implemented.

## Further Guidance

Department of Labor & Industry Montana

<http://erd.dli.mt.gov/safety-health>

Montana Safety Culture Act

<http://erd.dli.mt.gov/Portals/54/Documents/Safety-Health/Safety%20Culture%20Act.pdf?ver=2016-09-07-104121-863><http://workerscomp.mt.gov/Safety-Resources>

Workers Compensation Management Bureau/Health & Safety

<http://workerscomp.mt.gov/>